REMARKS

In the captioned Office Action, claims 1, 3-7, 9-16 are pending in the application. The Examiner has indicated that "claims 3-4 and 12-16 are deemed free of prior art" (Paper No. 22, Office Action dated July 25, 2002, page 6, third paragraph). He rejected the pending claims for obviousness-type double patenting, however, over three U.S. patents, No. 5,356,799, No. 5,741,684 and No. 6,013,859, and one application, U.S. serial No. 08/359,938, all of which are in the same lineage as the subject application. In addition, claims 1, 5-7, 9-11 stand rejected over the "lost count" of Interference No. 103,885.

In response, Applicants have amended claims 13-16, such that claims 13 and 15 are independent, and have cancelled claims 3, 4, and 12, along with the claims allegedly implicated by the above-mentioned interference.

The Examiner contends that claims 13-16 are not patentably distinct from certain claims cited in the co-pending '938 patent application. Similarly, claims 15-16 are allegedly not patentably distinct from the claims of the '859 patent. Applicants respectfully traverse these rejections.

To establish a *prima facie* case of obviousness-type double patenting, the Examiner must show that the invention defined in any claim of the present application is an obvious variation of subject matter claimed in the '859 patent or in the '938 application. Against this standard, Applicants respectfully submit that the Examiner has not met the PTO's burden with respect to claims 13-16.

More specifically, each of these claims prescribes a terminator sequence, an element that is disclosed in none of the cited claims. Indeed, there is nothing in the cited claims that would have suggested incorporating a terminator sequence, as presently recited, into "recombinant DNA molecule" that is linked to a gene of either sort prescribed in claims 13 and 15, respectively. In the absence of any disclosure or suggestion, the examiner cannot properly characterize the presently claimed subject matter as an obvious variation over anything claimed in the cited patent documents. Accordingly, the rejection is without merit and should be withdrawn.

In light of the foregoing, Applicants submit that the present application is in condition for allowance, and that no terminal disclaimer is needed. An early notice to this effect is earnestly solicited. The Examiner is invited to contact the undersigned by

telephone if it is felt that a telephone interview would advance the prosecution of the present application.

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 CFR §1.16-1.17, or credit any overpayment, to Deposit Account No. 19-0741. Should no proper payment be enclosed herewith, as by a check being in the wrong amount, unsigned, post-dated, otherwise improper or informal or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 19-0741.

Respectfully submitted,

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MARKED UP VERSION SHOWING CHANGES MADE

13. (Amended) [The method of claim 3, wherein said recombinant DNA molecule defined in step (a) further comprises] A method to produce hybrid seed with restored male fertility comprising the steps of:

(a) inserting into the genome of a plant cell of a pollen producing plant a gene which confers on said plant resistance to an herbicide or antibiotic, and linked to said gene a recombinant DNA molecule comprising:

(i) a DNA sequence which codes for a cytotoxic molecule;

(ii) a promoter capable of regulating the transcription of said DNA sequence in cells or tissues critical to pollen formation or function; and

(iii) a terminator sequence which defines a terminal signal during transcription of [the DNA sequence described in step (a)(i).] such DNA sequence;

(b) obtaining a transformed plant cell;

(c) regenerating from said plant cell a genetically transformed plant which is male sterile;

(d) increasing the number of genetically transformed plants by:

(i) crossing the genetically transformed plant described in step (c) above with a suitable male fertile plant;

(ii) using an herbicide or antibiotic to eliminate plants which do not contain the genes described in step (a) among plants grown from seed produced by such cross; and

(iii) repeating such a cross over several generations with the plants obtained as in step (d)(ii) above in the presence of said herbicide or antibiotic to increase the numbers of male sterile plants;

(e) inserting into a plant cell of a suitable male fertile plant selected from the same species a gene which confers on said plant resistance to an herbicide or antibiotic and linked to said gene a recombinant DNA molecule comprising:

(i) a DNA sequence which codes for RNA that is complementary to the RNA sequence coding for said cytotoxic molecule; and

(ii) a promoter which causes transcription of the DNA sequence defined in step (e)(i) above at or about the time of transcription of the DNA sequence defined in step (a)(i);

(f) obtaining a transformed plant cell from step (d);

(g) regenerating from said transformed plant cell described in step (d) above a genetically transformed male fertile plant; and

(h) producing a restorer line by:

(i) selfing the genetically transformed plant described in (g) and selecting from that selfing progeny, a plant homozygous for the male restorer trait;

(ii) permitting self-fertilization of said plant homozygous for the male restorer trait;

(iii) growing seed of said plant, over a number of generations to increase the number of genetically transformed plants; and

(iv) effecting a hybrid cross by pollinating said male sterile plants with pollen from said genetically transformed male fertile plants.

14. (Amended) The method of claim [3] 13, wherein said recombinant DNA molecule defined in step (e) further comprises a terminator sequence which defines a termination signal during transcription of the DNA sequence described in step (e)(i).

15. (Amended) [The method of claim 4, wherein said recombinant DNA molecule defined in step (a)(i) further comprises] A method of producing hybrid seed with restored male fertility comprising the steps of:

(a) (i) inserting into the genome of a plant cell of a plant that is capable of regeneration into a differentiated whole plant, a sense gene that confers resistance to an herbicide or antibiotic and linked to this a recombinant DNA molecule comprising:

A. a DNA sequence that when transcribed and translated codes for a cytotoxic molecule or a molecule which breaks down a substance into a cytotoxic molecule;

B. a promoter capable of regulating the transcription of said DNA sequence into RNA at or about the time of the transcription of the sense gene in cells or tissues critical to pollen formation or function; and

C. a terminator sequence which defines a termination signal during transcription of [the DNA sequence described in step (c)(i)A.] said DNA sequence;

(ii) obtaining a transformed plant cell of said plant; and

(iii) regenerating from said plant cell a plant which is genetically transformed with said DNA sequences described in (a)(i) above and is male sterile; and

(b) increasing the number of genetically transformed male sterile plants by:

(i) clonal propagation of said genetically transformed male sterile plant described in step (a) using tissue explants thereof, or other *in vitro* propagation techniques; or

(ii) A. crossing the genetically transformed male sterile plant described in (a) with a isogeneic male fertile plant;

B. using an herbicide or antibiotic to eliminate plants which do not contain the DNA sequence defined in (a) (i) amongst plants grown from seed produced by such cross; and

C. repeating such cross over several generations with plants obtained in step (a)(iii) above in the presence of said herbicide or antibiotic to increase the numbers of male sterile plants;

(c) producing a male fertile restorer plant by:

(i) inserting into the genome of a plant cell of a suitable male parent plant that is capable of regeneration into a differentiated whole plant a gene that confers resistance to an herbicide or antibiotic, linked to a recombinant DNA sequence comprising:

A. a gene that codes for a molecule that negates the disruption caused to cells or tissues critical to pollen formation or function in said genetically transformed female parent plant;

B. a promoter that functions in said cells or tissues critical to pollen formation or function to cause transcription of said gene into RNA at or about the time that the sense gene described in (a)(i) is active;

(d) increasing the number of genetically transformed male fertile restorer plants by:

(i) selfing the genetically transformed plant carrying the restorer trait described in (c), and selecting a plant homozygous for the restorer trait and increasing said plant by selfing in isolation; or

(ii) conducting anther or isolated microspore culture of the genetically transformed plant carrying the restorer trait described in (c) and selecting a plant homozygous for the restorer trait and increasing said plant by selfing in isolation.

16. (Amended) The method of claim [4] 15, wherein said recombinant DNA molecule defined in step (c)(i) further comprises a terminator sequence which defines a termination signal during transcription of the DNA sequence described in step (c)(i)A.